

What is claimed is:

1. A lock system for a horizontal tool box having first and second body components, said body components being moveable relative to one another between open and closed positions, said body components defining an enclosed space in the closed position, said tool box having a proximal end and a distal end and utilizing a padlock having a shackle and a padlock body having a key insertion surface, said padlock being moveable between a locked position and an unlocked position, said lock system comprising:

a support for holding the padlock inside the tool box, said support being secured within the tool box and opening along an outer surface of the toolbox, said support including a bracket, the shackle being received by the bracket such that the bracket secures the shackle to the tool box and the shackle is substantially inaccessible from outside the tool box, said padlock body being slidably disposed within the support such that the key insertion surface of the padlock body is exposed for external access along the proximal end of the tool box,

a first flange disposed at substantially the distal end of the box and a second flange disposed at substantially the proximal end of the box, said flanges each having a bore extending therethrough, the flanges being secured to and extending from the second body component,

an elongated latch rod having a proximal end and a distal end, said latch rod being supported in the first body component for sliding lateral movement between a release position wherein the latch rod does not engage the flange bores, and a latched position wherein the distal end of the latch rod slidably engages the first flange bore and the proximal end of the latch rod slidably engages the second flange bore when the box is in the closed position, the latch rod being disposed relative to the support such that the padlock body blocks the longitudinal movement of the proximal end of the latch rod and maintains the latch rod in the latched position when the body components are in the closed position and the padlock is locked, and the proximal end of the latch rod passes between the shackle and the padlock body to move the latch rod to the release position when the padlock is unlocked,

and a handle assessable from the outside of the box and disposed substantially along the proximal end of the box, said handle being coupled to the latch

rod such that the handle may be moved to slide the latch rod laterally between the latched and release positions, whereby a user may lock and unlock the padlock and move the latch rod between the latched and release positions from the proximal end of the box.

2. The lock system for a horizontal tool box of claim 1 wherein the latch rod comprises an elongated latch body portion and latching portions offset from the latch body portion, said latching portions being disposed to engage the bores of the flanges.

3. The lock system for a horizontal tool box of claim 1 wherein the latch rod has a longitudinal axis and the flanges are disposed in a plane substantially perpendicular to the longitudinal axis.

4. The lock system for a horizontal tool box of claim 3 wherein the first body component further comprises a first bracket for slidably supporting the distal end of the latch rod, and a second bracket having a bore for slidably receiving the distal end of the latch rod, the brackets being disposed such that the first flange is disposed between the first and second brackets, the distal end of the latch rod extending adjacent the first bracket and the flange, and through the bore of the second bracket when in the latched position.

5. The lock system for a horizontal tool box of claim 1 wherein the latch body portion is disposed to move along a first longitudinal axis and at least one of the latch body portions is disposed to move along a second longitudinal axis, said first and second longitudinal axes being disposed substantially parallel.

6. The lock system for a horizontal tool box of claim 5 wherein at least one said flange is disposed in a plane substantially perpendicular to the first longitudinal axis.

7. The lock system for a horizontal tool box of claim 6 wherein the first body component further comprises a first bracket for slidingly supporting the distal end of the latch rod, and a second bracket having a bore for slidingly receiving the distal end of the latch rod, the brackets being disposed such that the first flange is disposed between the first and second brackets, the distal end of the latch rod extending adjacent the first bracket and the flange, and through the bore of the second bracket when in the latched position.

8. The lock system for a horizontal tool box of claim 1 wherein the box further comprises a wall, at least a portion of the elongated latch rod being disposed substantially adjacent the wall such that any intrusion of the latch rod into the enclosed space is substantially minimized.

9. The lock system for a horizontal tool box of claim 2 wherein the box further comprises a wall and at least a portion of the elongated body portion is disposed substantially adjacent the wall such that any intrusion of the latch rod into the enclosed space is substantially minimized.

10. The lock system for a horizontal tool box of claim 1 further comprising a fastener for coupling the bracket to the support, the bracket including two openings therethrough, both said openings being operable to either receive the fastener to couple the bracket to the support or to receive the shackle, said openings being alternately disposable to secure the shackle at different positions in the support whereby the bracket may be used with at least two different types of padlocks.

11. The lock system for a horizontal tool box of claim 1 wherein the support further includes a wall extending along at least a portion of the padlock shackle and body, said support wall having an opening extending therethrough for receiving the proximal end of the latch rod, said support further including a channel protruding from said support wall disposed about at least a portion of said support opening and at least a portion of said proximal end of the latch rod.

12. The lock system for a horizontal tool box of claim 10 wherein the support further includes a wall extending along at least a portion of the padlock shackle and body, said support wall having an opening extending therethrough for receiving the proximal end of the latch rod, said support further including a channel protruding from said support wall disposed about at least a portion of said support opening and at least a portion of said proximal end of the latch rod.

13. A lock system for a tool box having first and second body components, said body components being moveable relative to one another between open and closed positions and defining an enclosed space in the closed position, said tool box utilizing a padlock having a shackle and a padlock body having a key insertion surface, said padlock being moveable between a locked position and an unlocked position, said lock system comprising:

a support for holding the padlock inside the tool box, said support being secured within the tool box and opening along an outer surface of the toolbox, said support including a bracket and a fastener for coupling the bracket to the support, the bracket including two openings therethrough, both said openings being operable to either receive the fastener to couple the bracket to the support or to receive the shackle such that the bracket secures the shackle to the tool box and the shackle is substantially inaccessible from outside the tool box, said openings being disposed to secure the shackle at different positions in the support whereby the bracket may be utilized with at least two different types of padlocks, the shackle being received by the bracket, said padlock body being slidably disposed within the support such that the key insertion surface of the padlock body is exposed for external access along the proximal end of the tool box,

at least one flange extending from the second body component into the enclosed space, said flange having a bore extending therethrough,

an elongated latch rod, said latch rod being supported in the first body component for sliding lateral movement between a release position wherein the latch rod does not engage the flange bore, and a latched position wherein the latch rod slidably engages the flange bore when the box is in the closed position, the latch rod being disposed relative to the support such that the padlock body blocks the

longitudinal movement of the proximal end of the latch rod and maintains the latch rod in the latched position when the body components are in the closed position and the padlock is locked, and the proximal end of the latch rod passes between the shackle and the padlock body to move the latch rod to the release position when the padlock is unlocked,

and a handle assessable from the outside of the box, said handle being coupled to the latch rod such that the handle may be moved to slide the latch rod between the latched and release positions.

14. The lock system claimed in claim 13 wherein the bracket comprises two legs disposed at a substantially perpendicular angle and an apex, the openings of the bracket being differently sized whereby the shackle of the padlock will be disposed at different positions within the support.

15. The lock system claimed in claim 13 wherein the bracket comprises two legs disposed at a substantially perpendicular angle and an apex, the openings of the bracket being disposed at different distances from the apex whereby the shackle of the padlock will be disposed at different positions within the support.

16. The lock system claimed in claim 13 wherein the support further includes a wall extending along at least a portion of the padlock shackle and body, said support wall having an opening extending therethrough for receiving the proximal end of the latch rod, said support further including a channel protruding from said support wall disposed about at least a portion of said support opening and at least a portion of said proximal end of the latch rod.

17. A lock system for a tool box having a wall, said tool box further having first and second body components, said body components being moveable relative to one another between open and closed positions and defining an enclosed space in the closed position, said tool box utilizing a padlock having a shackle and a padlock body having a key insertion surface, said padlock being moveable between a locked position and an unlocked position, said lock system comprising:

a support for holding the padlock inside the tool box, said support being secured within the tool box and opening along an outer surface of the toolbox, said support including a bracket, the shackle being received by the bracket such that the bracket secures the shackle to the tool box and the shackle is substantially inaccessible from outside the tool box, said padlock body being slidably disposed within the support such that the key insertion surface of the padlock body is exposed for external access along the proximal end of the tool box,

at least one flange extending from the second body component into the enclosed space, said flange having a bore extending therethrough,

an elongated latch rod comprising an elongated latch body portion and at least one latching portion offset from the latch body portion, said elongated latch body being disposed substantially adjacent said tool box wall whereby the enclosed space is substantially unobstructed by the elongated latch body portion, said latching portions being disposed to engage the bore of the at least one flange, said latch rod being supported in the first body component for sliding lateral movement between a release position wherein the at least one latching portion does not engage the flange bore, and a latched position wherein the at least one latching portion slidably engages the flange bore when the box is in the closed position, the latch rod being disposed relative to the support such that the padlock body blocks the longitudinal movement of the latch rod and maintains the at least one latching portion in the latched position when the body components are in the closed position and the padlock is locked, and the latch rod passes between the shackle and the padlock body to move the at least one latching portion to the release position when the padlock is unlocked,

and a handle assessable from the outside of the box, said handle being coupled to the latch rod such that the handle may be moved to slide the latch rod between the latched and release positions, whereby a user may lock and unlock the padlock and move the latch rod between the latched and release positions.

18. The lock system for a tool box of claim 15 wherein the latch body portion is disposed to move along a first longitudinal axis and at least one of the latch body portions is disposed to move along a second longitudinal axis, said first and second longitudinal axes being disposed substantially parallel.

19. The lock system for a tool box of claim 15 wherein the latch rod has proximal and distal ends and the support is disposed at the proximal end of the latch rod when the tool box is in the closed position such that the padlock body blocks the longitudinal movement of the proximal end of the latch rod and maintains the at least one latching portion in the latched position when the body components are in the closed position and the padlock is locked.

20. The lock system for a tool box of claim 17 wherein the support further includes a wall extending along at least a portion of the padlock shackle and body, said support wall having an opening extending therethrough for receiving the proximal end of the latch rod, said support further including a channel protruding from said support wall disposed about at least a portion of said support opening and at least a portion of said proximal end of the latch rod.